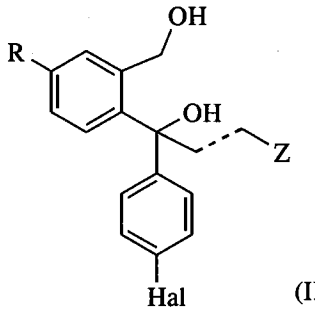
AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for the preparation of the S- or R-enantiomer of a diol having the formula

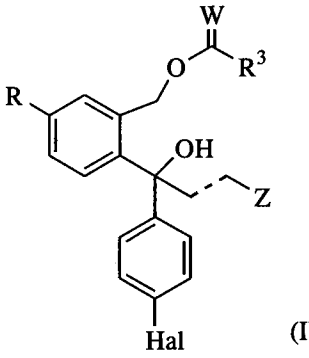


(II)

or a salt thereof;

wherein R is cyano or a group which may be converted to a cyano group, Z is $-CH_2-N(R'R'')$ wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be converted to a dimethylaminomethyl group, the dotted line is a double or single bond and Hal is a halogen; and/or

the opposite enantiomer of an acylated diol having the formula



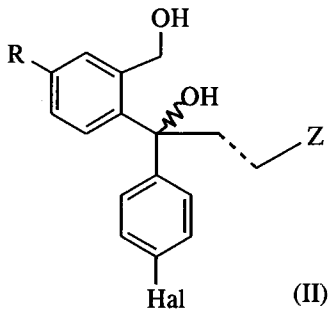
(IV)

or a salt thereof;

wherein R, Z, the dotted line and Hal are as defined above, W is O or S, and R^3 is $-Y-R^1$ wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-}

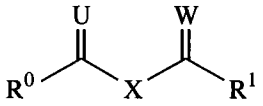
$_{10}$-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino and Y is a bond, O, S or NH, comprising

a) subjecting a racemic compound of formula



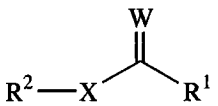
(II)

wherein R, Z, the dotted line and Hal are as defined above, to selective enzymatic acylation using an acylating agent having the formula



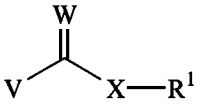
(IIIa)

or



(IIIb)

or



(IIIc)

or an isocyanate having the formula R^1-N=C=O or an isothiocyanate having the formula R^1-N=C=S;

wherein X is O or S; W is O or S; U is O or S; and V is halogen;

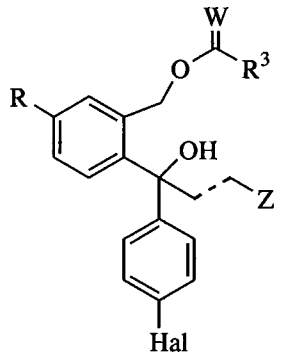
R^0 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10} - alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^0 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}- alkyl) amino;

R^1 is as defined above for R^0;

R^2 is as defined above for R^0, or R^2 is a suitable leaving group;

or R^0 and R^1 together form a chain of 3 to 5 carbon atoms;

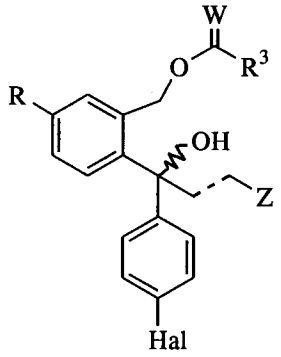
provided that W and U are not S when X is S; to form a mixture of the starting material of formula (II) in either the R- or the S-form and opposite enantiomer of a compound having the formula



(IV)

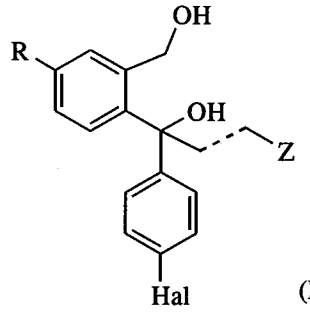
wherein R, W, Hal, R^3, the dotted line and Z are as defined above; or

b) subjecting a racemic compound of formula



(IV)

wherein R, Z, W, Hal, the dotted line and R^3 are as defined above; to selective enzymatic deacylation to form a mixture of deacylated compound of formula



(II)

wherein R, Hal, the dotted line and Z are as defined above, in either the R- or the S-form and the acylated starting material of formula (IV) in the form of the opposite enantiomer; and

c) ~~optionally~~ isolating, in either order, the S- or R-enantiomer of the compound of formula (II) or a salt thereof and/or the opposite enantiomer of the compound of formula (IV) or a salt thereof, wherein each isolated compound has an optical purity of at least 90% ee.

2. (previously presented) The method of claim 1, comprising step a).

3. (withdrawn) The method of claim 1, comprising step b).

4. (previously presented) The method of claim 2 wherein the acylation of the compound of formula (II) results in a mixture containing the compound of formula (II) in the S-form and the compound of formula (IV) in the R-form.

5. (previously presented) The method of claim 2 wherein the acylation of the compound of formula (II) results in a mixture containing the compound of formula (II) in the R-form and the compound of formula (IV) in the S-form.

6. (withdrawn) The method of claim 3 wherein the deacylation of the compound of formula (IV) results in a mixture containing the compound of formula (IV) in the S-form and the compound of formula (II) in the R-form.

7. (withdrawn) The method of claim 3 wherein the deacylation of the compound of formula (IV) results in a mixture containing the compound of formula (IV) in the R-form and the compound of formula (II) in the S-form.

8. (previously presented) The method of claim 1 wherein Hal is fluoro and R is halogen or cyano.

9. (previously presented) The method of claim 1 wherein the dotted line represents a single bond.

10. (previously presented) The method of claim 1 wherein Z is dimethylaminomethyl.

11. (canceled)

12. (canceled)

13. (withdrawn) The method of claim 2 wherein the acylating agent is a compound of formula (IIIa).

14. (previously presented) The method of claim 2 wherein the acylating agent is a compound of formula (IIIb).

15. (withdrawn) The method of claim 2 wherein the acylating agent is a compound of formula (IIIc).

16. (withdrawn) The method of claim 2 wherein U is O.

17. (previously presented) The method of claim 2 wherein W is O.

18. (previously presented) The method of claim 2 wherein X is O.

19. (previously presented) The method of claim 2 wherein

R^0 and R^1 are each independently selected from C_{1-4}-alkyl, C_{2-4}-alkenyl and C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-4}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di-(C_{1-4}-alkyl) amino, or R^0 and R^1 together form a chain of 3-5 carbon atoms; and

R^2 is selected from C_{1-4}-alkyl, C_{2-4}-alkenyl and C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}- alkoxy, C_{1-4}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di- (C_{1-4}-alkyl) amino, or R^2 is a leaving group.

20. (previously presented) The method of claim 19 wherein R^0, R^1 and R^2 are each independently selected from C_{1-3}-alkyl, C_{2-3}-alkenyl and C_{2-3}-alkynyl, all of which may optionally be substituted

one or more times with substituents selected from C_{1-3}-alkoxy, C_{1-3}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-3}-alkylamino and di-(C_{1-3}- alkyl) amino.

21. (previously presented) The method of claim 20 wherein R^0 and R^1 are each independently C_{1-3}-alkyl, and R^2 is C_{1-3}-alkyl substituted one or more times with halogen, or R^2 is C_{2-3}-alkenyl.

22. (currently amended) The method of claim 2 ~~13~~ wherein R^0 and R^1 are each independently selected from C_{1-4}-alkyl, C_{2-4}-alkenyl and C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-4}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di- (C_{1-4}- alkyl) amino.

23. (previously presented) The method of claim 22 wherein wherein R^0 and R^1 are each independently selected from C_{1-3}-alkyl, C_{2-3}-alkenyl or C_{2-3}-alkynyl, all of which may all optionally be substituted one or more times with substituents selected from C_{1-3}- alkoxy, C_{1-3}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-3}-alkylamino and di- (C_{1-3}-alkyl) amino.

24. (previously presented) The method of claim 22 wherein R^0 and R^1 are each independently C_{1-4}-alkyl.

25. (previously presented) The method of claim 24 wherein R^0 and R^1 are each independently C_{1-3}-alkyl.

26. (previously presented) The method of claim 14 wherein

R^1 is selected from C_{1-4}-alkyl, C_{2-4}-alkenyl and C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-6}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di-(C_{1-4}-alkyl) amino; and

R^2 is selected from C_{1-4}-alkyl, C_{2-4}-alkenyl and C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-6}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di-(C_{1-4}-alkyl) amino, or R^2 is a leaving group.

27. (previously presented) The method of claim 26 wherein R^1 is selected from C_{1-3}-alkyl, C_{2-3}-alkenyl and C_{2-3}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-3}-alkoxy, C_{1-3}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-3}-alkylamino and di-(C_{1-3}-alkyl) amino; and R^2 is C_{1-4}-alkyl substituted one or more times with halogen, or R^2 is C_{2-4}-alkenyl.

28. (previously presented) The method of claim 27 wherein R^2 is C_{1-3}-alkyl substituted one or more times with halogen, or R^2 is C_{2-3}-alkenyl.

29. (previously presented) The method of claim 27 wherein R^1 is C_{1-3}-alkyl.

30. (previously presented) The method of claim 29 wherein R^1 is selected methyl, ethyl, propyl, and C_{1-3}-alkyl substituted one or more times with halogen; and R^2 is C_{2-3}- alkenyl.

31. (previously presented) The method of claim 30 wherein R^2 is vinyl.

32. (previously presented) The method of claim 31 wherein R^1 is propyl.

33. (currently amended) The method of claim 2 ~~15~~ wherein R^1 is selected from C_{1-4}-alkyl, C_{2-4}-alkenyl and C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-4}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di-(C_{1-4}-alkyl)amino.

34. (previously presented) The method of claim 33 wherein R^1 is selected from C_{1-3}-alkyl, C_{2-3}-alkenyl and C_{2-3}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-3}- alkoxy, C_{1-3}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-3}-alkylamino and di-(C_{1-3}-alkyl) amino.

35. (previously presented) The method of claim 34 wherein R^1 is C_{1-3}-alkyl, C_{2-3}-alkenyl or C_{2-3}-alkynyl.

36. (withdrawn) The method of claim 2 wherein the acylating agent is an isocyanate of formula R^1-N=C=O or an isothiocyanate of the formula R^1-N=C=S.

37. (withdrawn) The method of claim 36 wherein the acylating agent is an isothiocyanate of the formula R^1-N=C=S.

38. (withdrawn) The method of claim 36 wherein the acylating reagent is an isocyanate of formula R^1-N=C=O.

39. (withdrawn) The method of claim 36 wherein R^1 is C_{1-4}-alkyl, C_{2-4}- alkenyl or C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-4}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-4}-alkylamino and di-(C_{1-4}-alkyl) amino.

40. (withdrawn) The method of claim 39 wherein R^1 is C_{1-3}-alkyl, C_{2-3}- alkenyl or C_{2-3}-alkynyl, all of which may optionally be substituted one or more times with C1-3-alkoxy, C_{1-3}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-3}- alkylamino and di-(C_{1-3}-alkyl) amino.

41. (withdrawn) The method of claim 40 wherein R^1 is C_{1-3}-alkyl, C_{2-3}-alkenyl or C_{2-3}-alkynyl.

42. (withdrawn) The method of claim 40 wherein R^1 is methyl, ethyl, or propyl.

43. (withdrawn) The method of claim 1 wherein Y is O or S.

44. (previously presented) The method of claim 43 wherein Y is O.

45. (withdrawn) The method of claim 43 wherein Y is S.

46. (withdrawn) The method Y is a bond.

47. (withdrawn) The method of claim 3 wherein Y is NH.

48. (withdrawn) The method of claim 3 wherein R^1 is C_{1-10}-alkyl, C_{2-10}- alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl) amino.

49. (withdrawn) The method of claim 48 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}- alkynyl all of which may optionally be substituted one or more times with substituents selected from hydroxy, halogen, amino, nitro and cyano.

50. (withdrawn) The method of claim 49 wherein R^1 is C_{1-10}-alkyl.

51. (previously presented) The method of claim 1 wherein the enzymatic acylation of step a) or the enzymatic deacylation of step b) is performed with a hydrolase enzyme.

52. (previously presented) The method of claim 51 wherein the is selected from a lipase, an esterase, an acylase, and a protease.

53. (previously presented) The method of claim 51 wherein the hydrolase enzyme is in the form of an immobilized enzyme or a Cross-Linked Enzyme Crystal enzyme.

54. (currently amended) The method of claim 51 wherein the hydrolase enzyme is selected from *Pseudomonas sp.* lipoprotein lipase, *Candida antartica* lipase B, *Thermomyces lanuginosus* lipase, and mutants and variants thereof, wherein the mutants and variants have an amino acid sequence that is more than 60% identical to the parent amino acid sequence.

55. (currently amended) The method of claim 54 wherein the hydrolase enzyme is selected from *Pseudomonas sp.* lipoprotein lipase, and mutants and variants thereof, wherein the mutants and

variants have an amino acid sequence that is more than 60% identical to the parent amino acid sequence.

56. (previously presented) The method of claim 55 wherein the hydrolase enzyme is *Pseudomonas sp.* lipoprotein lipase.

57. (withdrawn) The method of claim 54 wherein the hydrolase enzyme is selected from *Candida antartica* lipase B, and mutants and variants thereof.

58. (withdrawn) The method of claim 57 wherein the hydrolase enzyme is *Candida antartica* lipase B.

59. (withdrawn) The method of claim 58 wherein the hydrolase enzyme is *Candida antartica* lipase B immobilized on acrylic resin.

60. (withdrawn) The method of claim 54 wherein the hydrolase enzyme is selected from *Thermomyces lanuginosus* lipase, and mutants and variants thereof.

61. (withdrawn) The method of claim 60 wherein the hydrolase enzyme is *Thermomyces lanuginosus* lipase.

62. (withdrawn) The method of claim 61 wherein the hydrolase enzyme is an immobilized 1,3-regioselective lipase.

63. (previously presented) The method of claim 1 wherein the enzymatic acylation or the enzymatic deacylation is carried out in presence of an organic base, ~~or~~ an organic acid or a mixture thereof.

64. (previously presented) The method of claim 63 wherein the enzymatic acylation or enzymatic deacylation is carried out in the presence of an organic acid.

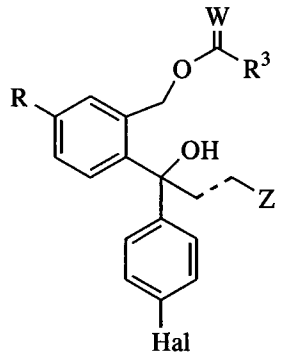
65. (previously presented) The method of claim 64 wherein the enzymatic acylation is carried out in the presence of an organic acid.

66. (previously presented) The method of claim 64 wherein the organic acid is an aromatic carboxylic acid or an aliphatic carboxylic acid.

67. (previously presented) The method of claim 64 wherein the organic acid is selected from n-propionic acid, iso-propionic acid, n-butyric acid, iso-butyric acid, iso-valeric acid, 2-ethylbutyric acid, cyclohexanecarboxylic acid, pivalic acid, benzoic acid, *p*-toluic acid, salicylic acid and 3-phenylpropionic acid.

68. (previously presented) The method of claim 67 wherein the organic acid is pivalic acid.

69. (withdrawn) The S- or R-enantiomer of a compound having the formula (IV)



(IV)

or a salt thereof;

wherein R is cyano or a group which may be converted to cyano, Z is $-CH_2-N(R'R'')$ wherein R' and R'' are each independently C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be converted to a dimethylaminomethyl group, Hal is a halogen, W is O or S, the dotted line represents a double or a single bond, R^3 is $-Y-R^1$, wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and

heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl) amino and Y is a bond, O, S or NH.

70. (withdrawn) The enantiomer of claim 69 wherein Hal is fluoro, and R is halogen or cyano.

71. (withdrawn) The enantiomer of claim 69 wherein the dotted line represents a single bond.

72. (withdrawn) The enantiomer of claim 70 wherein Z is dimethylaminomethyl.

73. (withdrawn) The enantiomer of claim 69 wherein Y is O or S.

74. (withdrawn) The enantiomer of claim 73 wherein Y is O.

75. (withdrawn) The enantiomer of claim 73 wherein Y is S.

76. (withdrawn) The enantiomer of claim 69 wherein Y is a bond.

77. (withdrawn) The enantiomer of claim 69 wherein Y is NH.

78. (withdrawn) The enantiomer of claim 69 wherein R^1 is C_{1-4}-alkyl, C_{2-4}-alkenyl or C_{2-4}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-4}-alkoxy, C_{1-4}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-6}-alkylamino and di-(C_{1-4}-alkyl) amino.

79. (withdrawn) The enantiomer of claim 78 wherein R^1 is C_{1-3}-alkyl, C_{2-3}-alkenyl or C_{2-3}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-3}-alkoxy, C_{1-3}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-3}-alkylamino and di-(C_{1-3}-alkyl) amino.

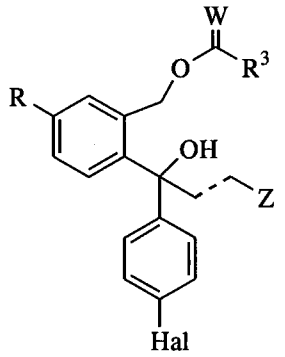
80. (withdrawn) The enantiomer of claim 79 wherein R^1 is C_{1-3}-alkyl.

81. (withdrawn) The enantiomer of claim 69 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-6}-alkylamino and di-(C_{1-10}-alkyl) amino.

82. (withdrawn) The enantiomer of claim 81 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from hydroxy, halogen, amino, nitro and cyano.

83. (withdrawn) The enantiomer of claim 82 wherein R^1 is C_{1-10}-alkyl.

84. (withdrawn) A method for the isolation and purification of the S- or R-enantiomer of a compound of formula (IV)



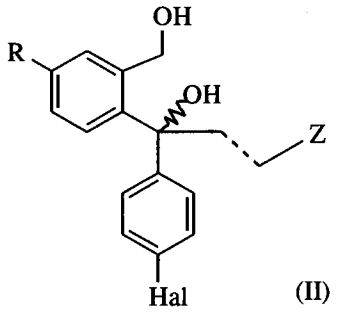
(IV)

or a salt thereof;

wherein R is cyano or a group which may be converted to a cyano group, the dotted line represents a double or single bond, Hal is a halogen, Z is $-CH_2-N$ (R''R'') wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be converted to a dimethylaminomethyl group, W is O or S, and R^3 is -Y-R^1 wherein Y is a bond, O, S or NH, and R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}- alkynyl, all of which may optionally be substituted with one or more substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino,

di-(C_{1-10}-alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}- alkylamino and di-(C_{1-10}-alkyl) amino

and/or the opposite enantiomer of a diol of formula (II)



(II)

or a salt thereof;

wherein R, Z, Hal and the dotted line are as defined above, from a mixture containing the S- or R-enantiomer of the compound of formula (IV) and the opposite enantiomer of the diol of formula (II), comprising:

a) treating the mixture with an acid in a mixture of water and an organic solvent;

b) separating the aqueous phase containing the diol of formula (II) as a salt of said acid from the organic phase to obtain an organic phase containing the compound of formula (IV) as a salt of said acid;

c) optionally isolating the diol of formula (II) as the base or a salt thereof; and

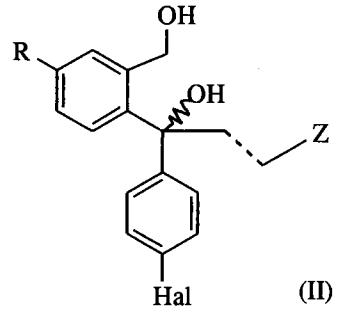
d) optionally isolating the compound of formula (IV) as the base or a salt thereof.

85. (withdrawn) The method of claim 84 wherein the S-enantiomer of the diol of formula (II) is separated from the R-enantiomer of the compound of formula (IV).

86. (withdrawn) The method of claim 84 wherein the S-enantiomer of the compound of formula (IV) is separated from the R-enantiomer of the diol of formula (II).

87. (withdrawn) The method of claim 84 wherein the mixture of step a) is prepared by a method comprising:

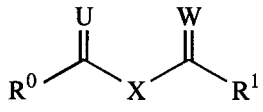
a) subjecting a racemic diol of formula (II)



(II)

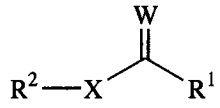
wherein R is cyano or a group which may be converted to a cyano group, Z is $-CH_2-N(R'R'')$ wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be converted to a dimethylaminomethyl group, the dotted line is a double or single bond, and Hal is a halogen;

to selective enzymatic acylation using an acylating agent having the formula



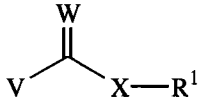
(IIIa)

or



(IIIb)

or



(IIIc)

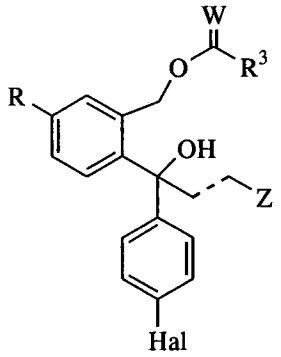
or an isocyanate having the formula $R^1-N=C=O$ or an isothiocyanate having the formula $R^1-N=C=S$; wherein X is O or S; W is O or S; U is O or S; and V is halogen; provided that each of W and U is not S when X is S;

R^0 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10} - alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^0 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}- alkyl) amino;

R^1 is as defined above for R^0; or R^0 and R^1 together form a chain of 3 to 5 carbon atoms;

R^2 is as defined above for R^0, or R^2 is a suitable leaving group;

to form a mixture of the S- or R-enantiomer of a diol of formula (II) and the opposite enantiomer of a compound of formula (IV)

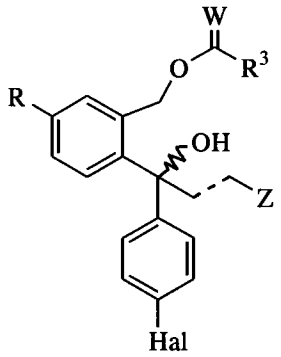


(IV)

wherein R, Hal, the dotted line and Z are as defined above;

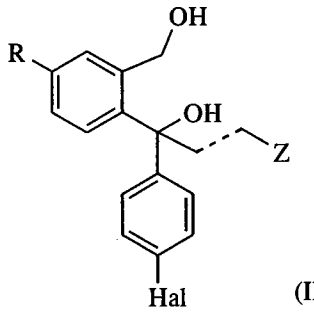
wherein W is O or S, and R3 is -Y-R^1 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino and Y is a bond, O, S or NH; or

b) subjecting a racemic compound of formula (IV)



(IV)

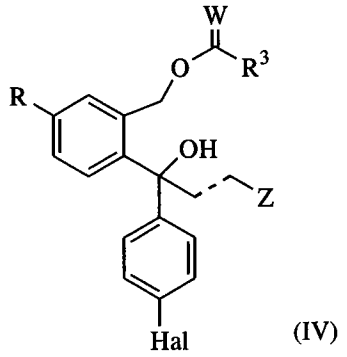
wherein R, Z, W, Hal, the dotted line and R^3 are as defined above; to selective enzymatic deacylation to form a mixture of the S- or R-enantiomer of a diol of formula (II)



(II)

wherein R, Hal, the dotted line and Z are as defined above, and the opposite enantiomer of a compound of formula (IV).

88. (withdrawn) A method for isolation and purification of the S- or R-enantiomer of an acyl derivative of formula (IV)

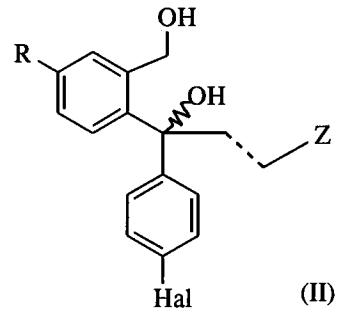


(IV)

or a salt thereof;

wherein R is cyano or a group which may be converted to a cyano group, Hal is a halogen, the dotted line represents a double or a single bond, Z is $-CH_2-N$ (R'R'') wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be converted to a dimethylaminomethyl group, W is O or S; and R^3 is -Y-R^1 wherein Y is a bond, O, S or NH; and R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-Alkylamino and di-(C_{1-10}-alkyl) amino

and/or the opposite enantiomer of a diol of formula (II)



(II)

or a salt thereof;

wherein R, Hal, Z and the dotted line are as defined above, from a mixture containing the S- or R-enantiomer of the acyl derivative of formula (IV) and the opposite enantiomer of the diol of formula (II), comprising:

a) treating the mixture with a mixture of water, a protic organic solvent and an apolar organic solvent;

b) separating the aqueous phase containing the diol of formula (II) from the organic phase to obtain an organic phase containing the acyl derivative of formula (IV);

c) optionally isolating the diol of formula (II) from the aqueous phase and/or the acyl derivative of formula (IV) from the organic phase, and

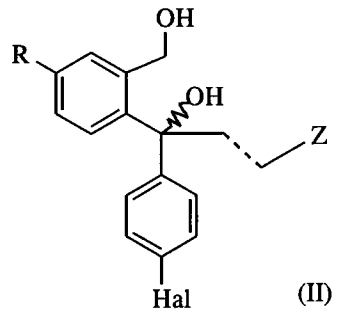
d) optionally converting the diol of formula (II) and/or the compound of formula (IV) to a salt thereof.

89. (withdrawn) The method of claim 88 wherein the S-enantiomer of the diol of formula (II) is separated from the R-enantiomer of the acyl derivative of formula (IV).

90. (withdrawn) The method of claim 88 wherein the S-enantiomer of the acyl derivative of formula (IV) is separated from the R-enantiomer of the diol of formula (II).

91. (withdrawn) The method of claim 88 wherein the mixture of step a) is prepared by a method comprising

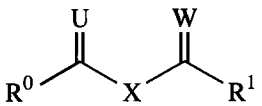
a) subjecting a racemic diol of formula (II)



(II)

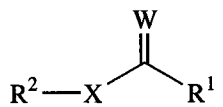
wherein R is cyano or a group which may be converted to a cyano group, Z is $-CH_2-N(R'R'')$ wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be converted to a dimethylaminomethyl group, the dotted line is a double or single bond, and Hal is a halogen;

to selective enzymatic acylation using an acylating agent having the formula



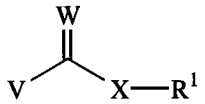
(IIIa)

or



(IIIb)

or



(IIIc)

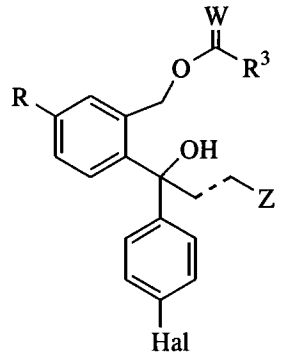
or an isocyanate having the formula $R^1-N=C=O$ or an isothiocyanate having the formula $R^1-N=C=S$; wherein X is O or S; W is O or S; U is O or S; and V is halogen; provided that each of W and U is not S when X is S;

R^0 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10} - alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^0 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}- alkyl) amino;

R^1 is as defined above for R^0; or R^0 and R^1 together form a chain of 3 to 5 carbon atoms;

R^2 is as defined above for R^0, or R^2 is a suitable leaving group;

to form a mixture of the S- or R-enantiomer of a diol of formula (II) and the opposite enantiomer of a compound of formula (IV)

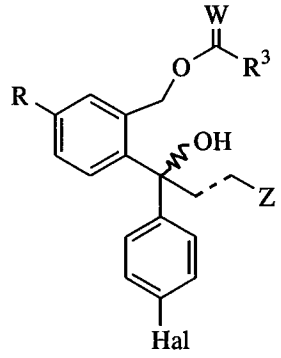


(IV)

wherein R, Hal, the dotted line and Z are as defined above;

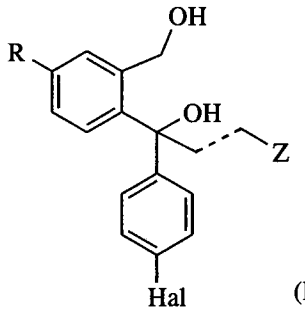
wherein W is O or S, and R3 is -Y-R^1 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino and Y is a bond, O, S or NH; or

b) subjecting a racemic compound of formula (IV)



(IV)

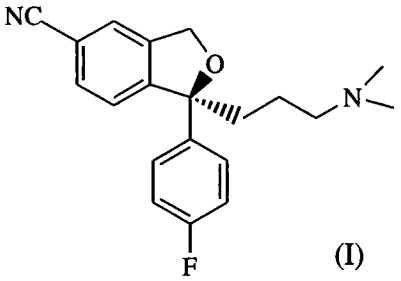
wherein R, Z, W, Hal, the dotted line and R^3 are as defined above; to selective enzymatic deacylation to form a mixture of the S- or R-enantiomer of a diol of formula (II)



(II)

wherein R, Hal, the dotted line and Z are as defined above, and the opposite enantiomer of a compound of formula (IV).

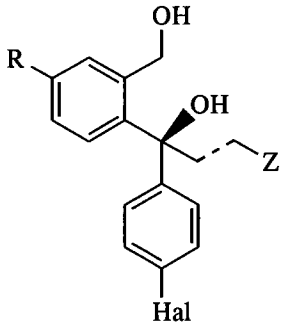
92. (withdrawn) A process for the preparation of escitalopram having the formula



(I)

or a pharmaceutically acceptable salt thereof, comprising

(i) preparing the S-enantiomer of a diol having the formula (IIs)

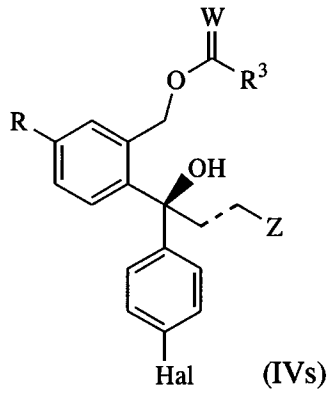


(IIs)

or a salt thereof;

wherein R is cyano or a group which may be converted to a cyano group, the dotted line represents a double or a single bond, Z is a dimethylaminomethyl group or a group which may be converted to a dimethylaminomethyl group and Hal is a halogen, or

(ii) preparing the S-enantiomer of an acylated diol having the formula (IVs)



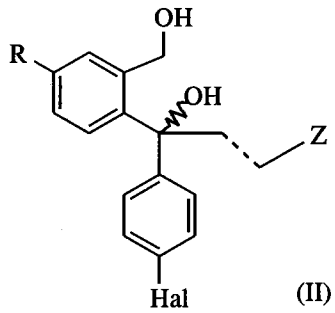
(IVs)

or a salt thereof;

wherein R, Z, the dotted line and Hal are as defined above, W is O or S, and R^3 is -Y-R^1, wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino; and Y is a bond, O, S or NH

wherein the diol of formula (IIs) and/or the acylated diol of formula (IVs) is prepared by a method comprising:

(a) subjecting a racemic diol of formula (II)

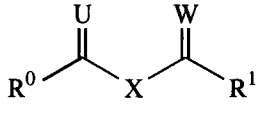


(II)

wherein R is cyano or a group which may be converted to a cyano group, Z is -CH_2-N(R'R'') wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be

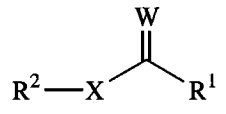
converted to a dimethylaminomethyl group, the dotted line is a double or single bond, and Hal is a halogen;

to selective enzymatic acylation using an acylating agent having the formula



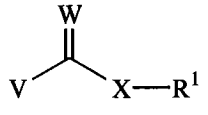
(IIIa)

or



(IIIb)

or



(IIIc)

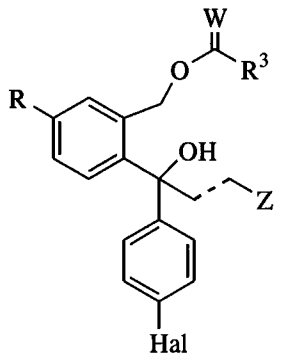
or an isocyanate having the formula R^1-N=C=O or an isothiocyanate having the formula R^1-N=C=S; wherein X is O or S; W is O or S; U is O or S; and V is halogen; provided that each of W and U is not S when X is S;

R^0 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10} - alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^0 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}- alkyl) amino;

R^1 is as defined above for R^0; or R^0 and R^1 together form a chain of 3 to 5 carbon atoms;

R^2 is as defined above for R^0, or R^2 is a suitable leaving group;

to form a mixture of the S- or R-enantiomer of a diol of formula (II) and the opposite enantiomer of a compound of formula (IV)

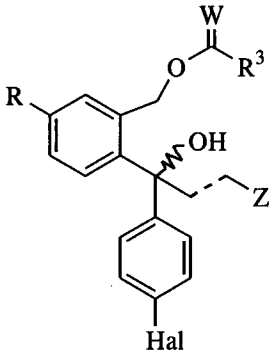


(IV)

wherein R, Hal, the dotted line and Z are as defined above;

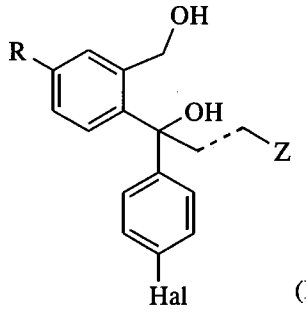
wherein W is O or S, and R^3 is -Y-R^1 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino and Y is a bond, O, S or NH; or

(b) subjecting a racemic compound of formula (IV)



(IV)

wherein R, Z, W, Hal, the dotted line and R^3 are as defined above; to selective enzymatic deacylation to form a mixture of the S- or R-enantiomer of a diol of formula (II)



(II)

wherein R, Hal, the dotted line and Z are as defined above, and the opposite enantiomer of a compound of formula (IV); and

(c) isolating, in either order, the S- or R-enantiomer of the compound of formula (II) or a salt thereof and/or the opposite enantiomer of the compound of formula (IV) or a salt thereof;

(iii) optionally subjecting the diol of formula (IIs) or the acylated diol of formula (IVs) to one or more reactions, in any order, selected from

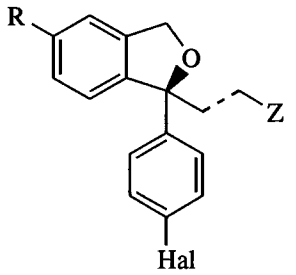
(a) conversion of the group R to a cyano group,

(b) conversion of the group Z to a dimethylaminomethyl group,

(c) reduction of a double bond represented by the dotted line to a single bond and

(d) conversion of the group Hal to a fluoro group;

(iv) effecting ring closure under basic conditions of the diol of formula (IIs) or the acylated diol of formula (IVs), or a labile ester derivative thereof, to form a compound of formula (V)



(V)

(v) subjecting the compound of formula (V) to, in any order:

(a) conversion of the group R to a cyano group, if R is not cyano,

(b) conversion of the group Z to a dimethylaminomethyl group, if Z is not dimethylaminomethyl,

(c) reduction to a single bond, if the dotted line represents a double bond, and

(d) conversion of Hal to a fluoro group, if Hal is not fluoro; and

(vi) isolating escitalopram or a pharmaceutically acceptable salt thereof.

93. (withdrawn) The method of claim 92 wherein the R- or S- enantiomer of ~~a~~ the diol of formula (II) and the opposite enantiomer of the compound of formula (IV) are separated from each other by a process comprising

(a) treating the mixture with an acid in a mixture of water and an organic solvent;

(b) separating the aqueous phase containing the diol of formula (II) as a salt of said acid from the organic phase to obtain an organic phase containing the compound of formula (IV) as a salt of said acid;

(c) optionally isolating the diol of formula (II) as the base or a salt thereof; and

(d) optionally isolating the compound of formula (IV) as the base or a salt thereof.

94. (withdrawn) The method of claim 92 wherein the R- or S-enantiomer of ~~a~~ the diol of formula (II) and the opposite enantiomer of the compound of formula (IV) are separated from each other by a process comprising

a) treating the mixture with a mixture of water, a protic organic solvent and an apolar organic solvent;

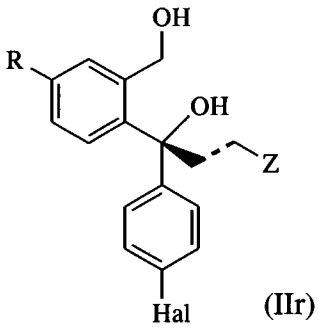
b) separating the aqueous phase containing the diol of formula (II), from the organic phase to obtain an organic phase containing the compound of formula (IV);

c) optionally isolating the diol of formula (II) from the aqueous phase and/or the compound of formula (IV) from the organic phase; and

d) optionally converting the diol of formula (II) and/or the compound of formula (IV) to a salt thereof.

95. (withdrawn) A method for the preparation of racemic citalopram and/or escitalopram or a pharmaceutically acceptable salt thereof comprising

(i) preparing the R-enantiomer of a diol having the formula (IIr)

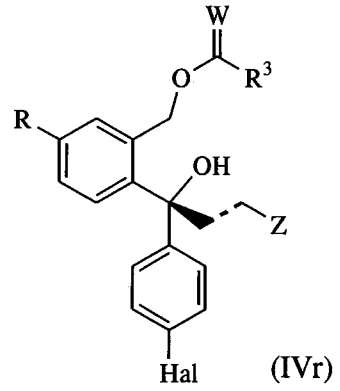


(IIr)

or a salt thereof;

wherein R is cyano or a group which may be converted to a cyano group, the dotted line represents a double or a single bond and Z is a dimethylaminomethyl group or a group which may be converted to a dimethylaminomethyl group and Hal is a halogen, or

(ii) preparing the R-enantiomer of an acylated diol having the formula (IVr)



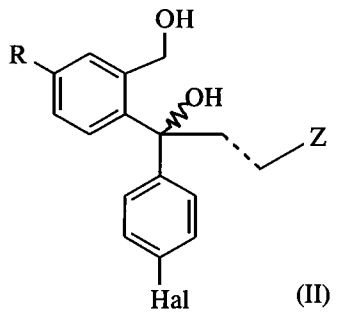
(IVr)

or a salt thereof;

wherein R, Z, the dotted line Hal are as defined above, W is O or S, and R^3 is -Y-R^1, wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino; and Y is a bond, O, S or NH,

wherein the diol of formula (IIr) and/or the acylated diol of formula (IVr) is prepared by a method comprising:

(a) subjecting a racemic diol of formula (II)

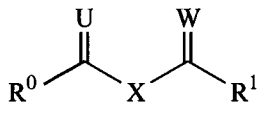


(II)

wherein R is cyano or a group which may be converted to a cyano group, Z is -CH_2-N(R'R'') wherein R' and R'' are C_{1-6}-alkyl, or R' and R'' are connected to each other to form a cyclic structure including the N-atom to which they are attached, or Z is a group which may be

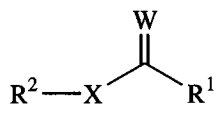
converted to a dimethylaminomethyl group, the dotted line is a double or single bond, and Hal is a halogen;

to selective enzymatic acylation using an acylating agent having the formula



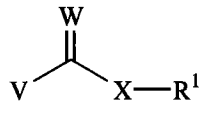
(IIIa)

or



(IIIb)

or



(IIIc)

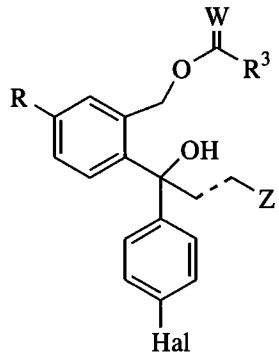
or an isocyanate having the formula R^1-N=C=O or an isothiocyanate having the formula R^1-N=C=S; wherein X is O or S; W is O or S; U is O or S; and V is halogen; provided that each of W and U is not S when X is S;

R^0 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10} - alkyl) amino, aryl, aryloxy, arylthio and heteroaryl, or R^0 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}- alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}- alkyl) amino;

R^1 is as defined above for R^0; or R^0 and R^1 together form a chain of 3 to 5 carbon atoms;

R^2 is as defined above for R^0, or R^2 is a suitable leaving group;

to form a mixture of the S- or R-enantiomer of a diol of formula (II) and the opposite enantiomer of a compound of formula (IV)

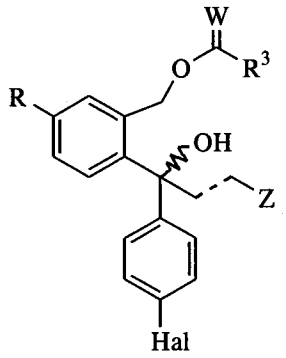


(IV)

wherein R, Hal, the dotted line and Z are as defined above;

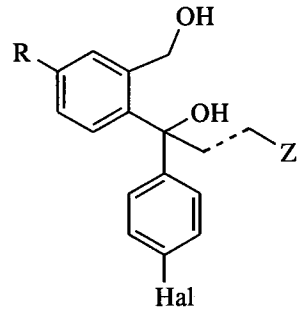
wherein W is O or S, and R3 is -Y-R^1 wherein R^1 is C_{1-10}-alkyl, C_{2-10}-alkenyl or C_{2-10}-alkynyl, all of which may optionally be substituted one or more times with substituents selected from C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino, di-(C_{1-10}-alkyl)amino, aryl, aryloxy, arylthio and heteroaryl, or R^1 is aryl, wherein any of the aryl and heteroaryl groups may optionally be substituted one or more times with substituents selected from C_{1-10}-alkyl, C_{2-10}-alkenyl, C_{2-10}-alkynyl, C_{1-10}-alkoxy, C_{1-10}-alkylthio, hydroxy, halogen, amino, nitro, cyano, C_{1-10}-alkylamino and di-(C_{1-10}-alkyl)amino and Y is a bond, O, S or NH; or

(b) subjecting a racemic compound of formula (IV)



(IV)

wherein R, Z, W, Hal, the dotted line and R^3 are as defined above; to selective enzymatic deacylation to form a mixture of the S- or R-enantiomer of a diol of formula (II)



(II)

wherein R, Hal, the dotted line and Z are as defined above, and the opposite enantiomer of a compound of formula (IV); and

(c) isolating, in either order, the S- or R-enantiomer of the compound of formula (II) or a salt thereof and/or the opposite enantiomer of the compound of formula (IV) or a salt thereof;

(iii) optionally subjecting the diol of formula (IIr) or the acylated diol of formula (IVr) to one or more reactions, in any order, selected from

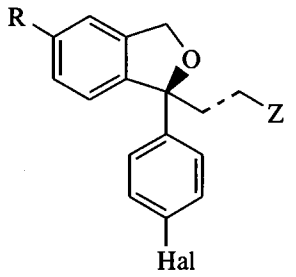
(a) conversion of the group R to a cyano group,

(b) reduction of a double bond represented by the dotted line to a single bond,

(c) conversion of the group Z to a dimethylaminomethyl group, and

(d) conversion of the group Hal to a fluoro group;

(iv) effecting ring closure under acidic conditions of the diol of formula (IIr) or the acylated diol of formula (IVr), to form a mixture of the S-enantiomer of the compound of formula (V)



(V)

and a minor amount of the corresponding R-enantiomer;

(v) subjecting the compound of formula (V) to, in any order:

(a) conversion of the group R to a cyano group ~~and~~, if R is not cyano,

(b) conversion of the group Z to a dimethylaminomethyl group, if Z is not dimethylaminomethyl,

(c) reduction to form a single bond, if the dotted line represents a double bond, and

(d) conversion of Hal to a fluoro group, if Hal is not fluoro; and

(vi) isolating escitalopram and/or racemic citalopram or a pharmaceutically acceptable salt thereof.

96. (withdrawn) The method of claim 95 wherein the racemic citalopram is isolated by precipitating racemic citalopram free base or a salt thereof, and recovering escitalopram from the mother liquor of the precipitation.

97. (withdrawn) The method of claim 95 wherein the mixture of the R- or S- enantiomer of the diol of formula (II) and the opposite enantiomer of the compound of formula (IV) are separated from each other by a process comprising

(a) treating the mixture with an acid in a mixture of water and an organic solvent;

(b) separating the aqueous phase containing the diol of formula (II) as a salt of said acid from the organic phase to obtain an organic phase containing the compound of formula (IV) as a salt of said acid;

(c) optionally isolating the diol of formula (II) as the base or a salt thereof; and

(d) optionally isolating the compound of formula (IV) as the base or a salt thereof.

98. (withdrawn) The method of claim 95 wherein the R- or S-enantiomer of the diol of formula (II) and the opposite enantiomer of the compound of formula (IV) are separated from each other by a process comprising

a) treating the mixture with a mixture of water, a protic organic solvent and an apolar organic solvent;

b) separating the aqueous phase containing the diol of formula (II), from the organic phase to obtain an organic phase containing the compound of formula (IV);

c) optionally isolating the diol of formula (II) from the aqueous phase and/or the compound of formula (IV) from the organic phase; and

d) optionally converting the diol of formula (II) and/or the compound of formula (IV) to a salt thereof.

99. (previously presented) The method of claim 8, wherein R is cyano.

100. (previously presented) The method of claim 19, wherein R^2 is a leaving group selected from succinimidyl, HOBt, and pfp.

101. (previously presented) The method of claim 25, wherein R^0 and R^1 are each independently selected from methyl, ethyl, and propyl.

102. (previously presented) The method of claim 101, wherein R^0 and R^1 are each independently propyl.

103. (previously presented) The method of claim 26, wherein R^2 is a leaving group selected from succinimidyl, HOBt, and pfp.

104. (previously presented) The method of claim 35, wherein R^1 is C_{1-3}-alkyl.

105. (previously presented) The method of claim 104, wherein R^1 is methyl, ethyl or propyl.

106. (previously presented) The method of claim 105, wherein R^1 is propyl.

107. (currently amended) The method of claim 2 ~~42~~, wherein R^1 is propyl.

108. (withdrawn) The enantiomer of claim 70 wherein R is cyano.

109. (withdrawn) The enantiomer of claim 72 wherein Z is dimethylaminomethyl.

110. (withdrawn) The enantiomer of claim 83 wherein R^1 is unbranched C_{1-10}-alkyl.

111. (new) The method of claim 1, wherein the S- or R-enantiomer of the compound of formula (II) or a salt thereof and/or the opposite enantiomer of the compound of formula (IV) or a salt thereof is isolated from a mixture of the S- or R-enantiomer of a diol of formula (II) or a salt thereof and the opposite enantiomer of an acyl derivative of formula (IV) or a salt thereof, by a method comprising the steps of:

(i) treating the mixture with water and an organic solvent in the presence of an acid;

(ii) separating the aqueous phase containing the diol of formula (II) as a salt of the acid from the organic phase to obtain an organic phase containing the acyl derivative of formula (IV) as a salt of the acid; and

(iii) isolating the diol of formula (II) as the base or as a salt thereof and/or the acyl derivative of formula (IV) as the base or as a salt thereof.